PLAN FOR THE UNIFORM MAPPING OF EARTH RESOURCES AND ENVIRONMENTAL COMPLEXES FROM SKYLAB IMAGERY

EREP INVESTIGATION #510

Period Covered: March 1, 1975 to March 31, 1975

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Monthly Plans and Progress Report

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OVERALL STATUS

Natural Vegetation Analog Study

We have done the best job possible to isolate areas for detailed, quantitative evaluation of image interpretability and vegetational resource mapping. Within each of the Colorado Plateau and Sierra-Lahontan test sites, we attempted to select areas where all systems were stacked over locations in which ground truth was strong and support aerial photography was also available. In the Colorado Plateau area this has been possible with all data; but in the Sierra-Lahontan, we had to compromise by selecting a number of areas where collectively all systems were represented but where individually ground truth was weak or where usable, cloud-free imagery from one or more systems was lacking.

This selection has been completed and we are enlarging imagery from all available systems to a standard scale of 1:250,000 for the comparative interpretation and mapping experiments.

Within the area of these enlargements we are selecting both training and test sets representing each of the available analogs. We have encountered a problem in the comparability of the photographic data (EREP) between the two regions. This is attributable to

photographic exposure, processing, and possibly duplication variables. It complicates the testing of interregional interpretability and makes it necessary to use highly experienced interpreters for this part of the experiment. For each analog we are using 3 training examples of each analog and 5 test examples. We cut the number of analogs tested to the point that we have a balanced experiment within each region, but there was no way we could use all of the same analogs in both regions.

Rice Analog Study

Photo interpretation is being done to determine the usefulness of Skylab and supporting aircraft photography for rice crop yield estimation. While only a limited number of fields can be tested regarding vigor and stress indicators, we anticipate that we will be able to determine the relative usefulness of each system tested by these judgments.

We have been preparing materials for a final series of formal photo interpretation tests in which we will use the S-192 color composites provided of our California and Louisiana test sites as well as S-190A and S-190B and ERTS photos.

We have continued to work on the final report text and the photo illustrations to be included in the report.

PLANS FOR NEXT REPORTING PERIOD

A short series of formal photo interpretation tests is being prepared using the materials from Skylab, ERTS, and supporting

aircraft photography. We will employ student photo interpreters from the University of California for the testing phase.

In addition to the formal testing, the project staff will perform subjective photo interpretation on questions posed by our research.

We will continue to work on the final report text and photographs as planned.

TRAVEL PLANS

No travel is planned.

PERSONNEL

No change.

PROBLEMS

None.